



FIG.--2

Percent Similarity

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	51.0	52.9	27.0	49.0	56.9	43.1	17.6	18.6	55.9	37.0	42.2	16.7	14.7	50.0	39.1	36.9	36.0	88.9	46.1	1
2	43.1	48.5	22.5	47.1	55.9	43.3	15.4	21.2	54.4	37.0	41.3	15.4	13.5	55.2	40.2	34.5	34.0	88.9	42.3	2
3	42.6	48.5	21.3	42.2	49.0	41.7	15.5	22.3	68.9	38.0	41.7	16.5	12.6	50.0	40.2	34.5	33.0	85.2	44.7	3
4	66.7	66.3	70.6	25.8	31.5	31.5	18.0	20.2	22.5	34.8	31.5	12.4	16.9	28.1	33.3	28.6	33.7	22.2	29.2	4
5	44.6	51.0	53.5	63.1	65.7	40.2	12.7	22.5	51.0	38.0	39.2	11.8	12.7	59.4	41.4	36.9	40.0	81.5	49.0	5
6	36.6	41.2	46.5	61.9	34.3	46.1	16.7	24.5	52.0	46.0	44.1	13.7	15.7	69.8	44.8	41.7	47.0	85.2	47.1	6
7	54.5	50.5	56.3	60.5	52.5	48.5	21.2	19.2	45.6	34.0	98.1	19.2	14.4	49.0	35.6	28.6	41.0	74.1	61.5	7
8	75.0	77.7	76.3	80.0	77.2	72.8	71.0	24.0	19.4	21.0	21.2	24.0	66.3	14.6	16.1	14.3	20.0	22.2	18.3	8
9	73.5	71.0	73.7	78.6	77.6	71.4	73.7	68.3	22.3	19.0	17.3	23.8	21.2	20.8	16.1	16.7	20.0	37.0	22.1	9
10	42.6	43.7	31.1	68.2	46.5	45.5	52.4	72.0	72.7	40.0	44.7	17.5	14.6	55.2	41.4	34.5	37.0	85.2	49.5	10
11	55.2	53.1	55.1	58.8	55.2	47.9	54.5	70.3	71.9	53.1	34.0	16.0	16.0	41.7	72.4	45.2	50.0	44.4	33.0	11
12	55.4	52.4	56.3	60.5	53.5	50.5	1.9	71.0	75.8	53.4	54.5	18.3	14.4	47.9	34.5	28.6	42.0	70.4	61.5	12
13	73.1	75.8	74.5	79.7	80.6	77.4	72.3	67.0	69.5	72.3	76.9	73.4	21.2	11.5	12.6	10.7	14.0	33.3	15.4	13
14	80.4	81.9	76.3	81.2	81.5	80.4	74.2	33.7	73.1	77.4	76.9	74.2	72.0	13.5	13.8	14.3	15.0	22.2	15.4	14
15	46.3	41.7	48.4	60.0	37.9	27.4	48.4	76.7	73.9	45.3	47.8	49.5	81.6	84.9	47.1	35.7	40.6	74.1	50.0	15
16	54.2	54.1	54.1	61.2	55.4	50.6	57.0	74.7	74.7	51.8	27.6	58.1	79.5	83.5	44.0	44.0	41.4	33.3	31.0	16
17	55.6	56.6	61.4	67.5	59.3	55.6	68.7	80.8	81.9	59.0	56.0	68.7	87.2	83.3	58.5	54.4	56.0	25.9	35.7	17
18	51.0	56.1	58.2	59.5	51.0	45.8	53.5	75.3	69.1	56.1	42.9	52.5	77.5	78.7	48.9	51.8	40.2	44.4	46.0	18
19	11.1	11.1	14.8	57.1	18.5	14.8	25.9	68.0	51.9	14.8	37.5	29.6	55.6	72.0	13.0	35.7	57.9	41.7	81.5	19
20	50.5	52.4	53.4	61.6	45.5	49.5	38.5	71.0	73.7	48.5	57.6	38.5	75.5	74.2	48.4	62.8	61.4	48.5	18.5	20
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

EG3IN.PRO
FUSEQIN.PRO
GLJOIN.PRO
ACRHYPO.PRO
ASPKAWA1.PRC
ASPACU1.PRO
HUMIN.PRO
11AG8IN.PRO
ERWCARIN.PRC
GLIO314.PRO
GLIO3HYP.PRO
HGRIS.PRO
RHMARIN.PRO
SLVIN.PRO
PENNOT.PRO
PHANHYPO.PRC
F42HYPO.PRO
EMDESHYP.PRC
MYCINS.PRO
CHBRAS.PRO

FIGURE 4

DNA Sequence of EGIII Without Introns

ATGAAGTTCCTTCAAGTCCTCCCTGCCCTCATACCGGCCGCCCTGGCCCAAACCAGCTGTGA
CCAGTGGGCAACCTTCACTGGCAACGGCTACACAGTCAGCAACAACCTTTGGGGAGCATCAG
CCGGCTCTGGATTTGGCTGCGTGACGGCGGTATCGCTCAGCGGCGGGGCCTCCTGGCACGCA
GACTGGCAGTGGTCCGGCGGCCAGAACAACGTCAAGTCGTACCAGAACTCTCAGATTGCCAT
TCCCCAGAAGAGGACCGTCAACAGCATCAGCAGCATGCCCACCACTGCCAGCTGGAGCTACA
GCGGGAGCAACATCCGCGCTAATGTTGCGTATGACTTGTTACCGCAGCCAACCCGAATCAT
GTCACGTACTCGGGAGACTACGAACTCATGATCTGGCTTGGCAAATACGGCGATATTGGGCC
GATTGGGTCCTCACAGGGAACAGTCAACGTGGTGGCCAGAGCTGGACGCTCTACTATGGCT
ACAACGGAGCCATGCAAGTCTATTCCTTTGTGGCCCAGACCAACACTACCAACTACAGCGGA
GATGTCAAGAACTTCTTCAATTATCTCCGAGACAATAAAGGATACAACGCTGCAGGCCAATA
TGTTCTTAGCTACCAATTTGGTACCGAGCCCTTCACGGGCAGTGGAACCTCTGAACGTCGCAT
CCTGGACCGCATCTATCAAC

FIGURE 5